Microbially Self-Selecting Wetlands in a Box – Biological Water Treatment System
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MRU's (metal removal units) are microbially self-selecting wetlands in a box used to oxidize or reduce mine drainage impacts. As a corollary to the bioleachate process, the materials precipitating within the MRUs are separated by their RedOx potential. This means that a host of unique environments can be engendered to remove difficult and valuable resources such as schwertmannite (formed naturally in low pH conditions) and manganese oxide. Due to the high biological density of the MRU's their requisite site footprint is generally about 1/100th the scale for the same treatment.

MRUs can also be used for agricultural water and nutrient recycling and a host of reductive metabolic pathways including methane genesis, hydrogen sulfide or selenium reduction.

BENEFITS

- SCALABLE, MODULAR, TRANSPORTABLE
- PATENTED, SEMI PASSIVE BIOLOGICAL PROCESS
- EASY SEASONAL MAINTENANCE
- HIGH PURITY BIOLEACHATE = ROI
- Fe: FE 800+GRAMS/DAY/M3 @ PH <4 AS SCHWERTMANNITE
- Mn: MN 300+GRAMS/DAY/M3 @ PH <7.5 AS MN OXIDES (MN IV)
- Al: AL LOWEST OBSERVED EFFLUENT = 0.05MG/L
- Se: SE, H2S, CH4, PRECIOUS METALS AND RARE EARTHS IN DEVELOPMENT

SPECS:

MODEL	MK3.01	MK3.07	MK3.180
HEIGHT	24"	4'	5'
WIDTH	24"	4'	5'
LENGTH	40"	8'	10'
DRY WEIGHT (LBS)	40	600	1300
VOLUME	100	750	1800
OFF GRID SOLAR READY	N	Y	Y
FLOW / GPM	5-20	10-100	20-150
LIFESPAN	50 YEARS	50 YEARS	50 YEARS